

Serial No.: 10/810,427

Examiner: L. Cazan

Title: MACHINE STATOR FABRICATION METHOD

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REMARKS/ARGUMENTS

Reconsideration is requested in view of the following remarks. Claims 12 and 13 have been editorially revised to correct typographical errors. Claims 16-24 and 34-44 have been canceled. Claims 25-33 have been withdrawn from consideration without prejudice. Claims 1-15 remain under consideration in the present application.

Supplemental Information Disclosure Statement

Applicants note that a Japanese version of the applied Satomi reference is present in the image file wrapper. Applicants have possession of a corresponding JPO Abstract and English machine translation. In the event these might have been inadvertently not included when submitting Applicants' original IDS, Applicants have submitted a supplemental IDS along with the amendment/response that was filed on December 4, 2006, to include a copy of the corresponding English machine translation of the Satomi reference (JP 07336992 A) in accordance with 37 C.F.R. §1.97(f).

Election of Claims

Applicants affirm the election of Group I, claims 1-15, without traverse.

Claim to Priority

Applicants included a reference to the prior application on Applicants' Division Application Transmittal Form; and the filing receipt does make reference to the prior application. Applicants have accordingly editorially revised the specification to include the proper sentence identifying the present application as a division of Application No. 09/683,900 which was filed on 28 February, 2002, and is now abandoned.

Claim Objections

Claims 12-15 are objected to because in claim 12, line 2, "fabrication a" should read --fabrication of a--. Claim 12 has been editorially revised to now recite "fabrication of a". This objection is therefore overcome.

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Claim Rejections – 35 USC §102

Claims 1-15 are rejected under 35 U.S.C. §102(b) as anticipated by Mischler et al. (US 4,255,684). Applicants respectfully traverse this rejection.

Claim 1 is directed to a method for fabricating a machine stator. The method requires positioning pre-wound stator windings around respective teeth of a laminated stator yoke; and directly molding composite tooth tips into contact with respective teeth of the laminated stator yoke.

Mischler et al. disclose a laminated motor stator structure with molded composite pole pieces. The stator structure employs a substantially identical pair of laminated cores, wherein each core is constructed of horizontally nested layers of flat strip that may be configured with straight legs connected via a yoke member. The core sections are then assembled coplanar to one another to yield a magnetic structure with inwardly projecting contacting pairs of straight legs, which are the stator poles. A molded magnetic composite pole piece is mounted on and holds together every contacting pair of core straight legs.

In contradistinction, claim 1 requires a laminated stator yoke having teeth rather than legs such as disclosed by Mischler et al. The teeth are respective portions of the laminated stator yoke. Further, claim 1 requires directly molding composite tooth tips into contact with respective teeth of the laminated stator yoke. This is clearly different from the invention of Mischler et al. that discloses using molded composite pole pieces mounted on and holding together every contacting pair of core straight legs.

Thus, Mischler et al. neither teach nor suggest composite tooth tips that contact respective teeth of a laminated stator yoke subsequent to positioning pre-wound stator windings around the respective teeth of the laminated stator yoke as required by claim 1, and such as seen in particular embodiments illustrated in Figures 3-4, 7-8, 10-11 and 13. The composite pole pieces disclosed by Mischler et al. do not correspond to the composite tooth tips as recited in claim 1. Nowhere do the claims or specification even suggest the composite tooth tips are or can be employed as pole pieces such as the composite pole pieces disclosed by Mischler et al. Further, the legs disclosed by Mischler et al. do not correspond to the teeth recited in claim 1 since, for example, the

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legs disclosed by Mischler et al. require a composite pole piece to hold together each contacting pair of legs. Since the laminated core disclosed by Mischler et al. is not vertically laminated, but instead is horizontally laminated, it is extremely difficult and expensive and therefore undesirable to form teeth such as recited in claim 1. Thus, Mischler et al. bend the horizontally laminated ends of the horizontally laminated core to form straight legs that function as stator poles subsequent to assembly of a pair of core sections coplanar with one another. The claimed respective teeth of a laminated stator yoke are therefore clearly different from the legs disclosed by Mischler et al.

Nowhere do Mischler et al. teach or suggest positioning pre-wound stator windings around respective teeth of a laminated stator yoke; and directly molding composite tooth tips into contact with respective teeth of the laminated stator yoke.

For at least these reasons, claim 1 is patentable over Mischler et al. Claims 2-3 and 7 are patentable since they depend from claim 1 that is patentable. Applicants do not concede the correctness of the rejection.

Claim Rejections – 35 USC §103

Claim 4 is rejected under 35 U.S.C. §103(a) as unpatentable over Mischler et al. in view of Satomi (JP7336992). Applicants respectfully traverse this rejection for the same reasons discussed above regarding the rejection of claim 1. As Applicants understand the Japanese language reference, based on the English translation and on the Figures, Satomi does not remedy the deficiencies of Mischler et al. Satomi, for example, teaches that poles (pole pieces) and stator teeth are distinct elements known in the art, and thus cannot be interpreted to correspond with one another. Further, Satomi does not teach a method for fabricating a machine stator requiring positioning pre-wound stator windings around respective teeth of a laminated stator yoke, and then directly molding composite tooth tips into contact with respective teeth of the laminated stator yoke. For at least these reasons, claim 4 is patentable over the cited art, alone or in combination, since claim 4 depends from claim 1 that is allowable.

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Claims 5 and 6 are rejected under 35 U.S.C. §103(a) as unpatentable over Mischler et al. in view of Crabb (US 3,862,492). Applicants respectfully traverse this rejection for the same reasons discussed above regarding the rejection of claim 1. Crabb does not remedy the deficiencies of Mischler et al. Crabb does not teach a method for fabricating a machine stator requiring positioning pre-wound stator windings around respective teeth of a laminated stator yoke, and then directly molding composite tooth tips into contact with respective teeth of the laminated stator yoke. For at least these reasons, claims 5 and 6 are patentable over the cited art, alone or in combination, since claims 5 and 6 depend ultimately from claim 1 that is allowable.

Claims 8-10 are rejected under 35 U.S.C. §103(a) as unpatentable over Heidrich (US20020149282). Applicants respectfully traverse this rejection for the same reasons discussed above regarding the rejection of claim 1. Heidrich does not remedy the deficiencies of Mischler et al. Heidrich does not teach a method for fabricating a machine stator requiring positioning pre-wound stator windings around respective teeth of a laminated stator yoke, and then directly molding composite tooth tips into contact with respective teeth of the laminated stator yoke. For at least these reasons, claims 8-10 are patentable over the cited art, alone or in combination, since claims 8-10 depend ultimately from claim 1 that is allowable.

Claim 11 is rejected under 35 U.S.C. §103(a) as unpatentable over Mischler et al. in view of Kliman (US 6,274,962). Applicants respectfully traverse this rejection for the same reasons discussed above regarding the rejection of claim 1. Kliman does not remedy the deficiencies of Mischler et al. Kliman does not teach a method for fabricating a machine stator requiring positioning pre-wound stator windings around respective teeth of a laminated stator yoke, and then directly molding composite tooth tips into contact with respective teeth of the laminated stator yoke. For at least these reasons, claim 11 is patentable over the cited art, alone or in combination, since claim 11 depends from claim 1 that is allowable.

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Claims 12-15 are rejected under 35 U.S.C. §103(a) as unpatentable over Mischler and Kliman in view of Heidrich. Applicants respectfully traverse this rejection for the same reasons discussed above regarding the rejection of claim 1. The cited art, alone or in combination, does not teach a method for fabricating a machine stator requiring positioning pre-wound stator windings around respective teeth of a laminated stator yoke, and then directly molding composite tooth tips into contact with respective teeth of the laminated stator yoke. For at least these reasons, claims 12-15 are patentable over the cited art, alone or in combination, since claims 12-15 depend ultimately from claim 1 that is allowable.

Favorable reconsideration in the form of a Notice of Allowance is requested. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at (507) 351-4450.

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PATENT TRADEMARK OFFICE

Respectfully submitted,

Dated: January 23, 2007

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